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The Influence of the Physical Geography  
of Athens and of Rome upon their History

Classics

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THE INFLUENCE OF THE PHYSICAL GEOGRAPHY  
OF ATHENS AND OF ROME UPON  
THEIR HISTORY

BY

SUSAN KATHRYN WILLIAMS

A. B. Carthage College, 1914

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THESIS

Submitted in Partial Fulfillment of the Requirements for the

Degree of

MASTER OF ARTS

IN THE CLASSICS

IN

THE GRADUATE SCHOOL

OF THE

UNIVERSITY OF ILLINOIS

1915





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UNIVERSITY OF ILLINOIS  
THE GRADUATE SCHOOL

June 14 1915

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPER-  
VISION BY Susan Kathryn Williams

ENTITLED The Influence of the Physical Geography of Athens and of  
Rome upon their History

BE ACCEPTED AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE  
DEGREE OF Master of Arts

W. A. Pfaffner

In Charge of Thesis

H. J. Barton

Head of Department

Recommendation concurred in:\*

Arthur Stanley Pease

H. V. Carter

Committee

on

Final Examination\*

\*Required for doctor's degree but not for master's.





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THE INFLUENCE OF THE PHYSICAL GEOGRAPHY OF ATHENS  
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The general theory that physical environment affects or even determines the character of a people has been widespread from the time when historical speculation had its beginning to the present day. Prominent among its exponents have been Montesquieu,<sup>1</sup> who in his "Esprit des Lois" lays a peculiar emphasis upon the effects of climate upon customs; Buckle,<sup>2</sup> who advances the theory that conditions of nature are the prime causes of intellectual progress; Ritter,<sup>3</sup> who wrote two volumes upon the subject, "Die Erdkunde im Verhältniß zur Natur und zur Geschichte des Menschen", Dr. Robert Pöhlmann<sup>4</sup> has made a very important contribution to the discussion of this theory in its relation to the history of Greece in his work entitled, "Hellenische Anschauungen über den Zusammenhang zwischen Natur und Geschichte." To Friedrich Ratzel,<sup>5</sup> however, is due the credit for founding the modern scientific theory in its general application and of winning for it wide recognition which, in this

1. Chas. Louis De Secondat Montesquieu, *Esprit des Lois*; first published at Geneva in 1748. Books 14 to 18 contain his theories on the relation of geography to history.
2. Henry Thos. Buckle, *History of Civilization in England*; London 1861.
3. Karl Ritter, *Die Erdkunde im Verhältniß zur Natur und zur Geschichte des Menschen*; Berlin, 1817-1818.
4. ~~Dr. Robert Pöhlmann~~, *Hellenische Anschauungen über den Zusammenhang zwischen Natur und Geschichte*; Leipzig, 1879
5. Friedrich Ratzel, author of *Anthropo-Geographie* (Stuttg. 1882-91, 2 vols; vol. I in 2nd ed. 1899) which Miss Semple makes the basis of her work. Other works are:- *History of Mankind*; London, 1896-1898; *Der Lebensraum, eine bio-geographische Studie*; Tübingen, 1901, etc.





country at least, has come about in large measure through the devoted discipleship of Miss Ellen Semple.<sup>1</sup> As is natural in the case of any new science, much more has been claimed for it than can be substantiated, many writers applying this theory as a key to solve all the mysteries of achievement in the history of the world. It is the purpose of this present paper to examine critically the claims that have been advanced by one scholar or another regarding the influence which the physical features of Attica and of Latium had upon the Athenian and Roman character and in this way upon the history of the two peoples. We intend in our discussion to follow the outline of Miss Semple,<sup>2</sup> as being that of the best modern representative of the general theory. She divides the results caused by geographic environment into physical, psychical, economic, social, and migratory effects. The human race is affected physically with respect to pigmentation and muscular form. Climate, productivity of soil, natural features affecting occupations, etc. make various changes in the physical type of resident man. The color and texture of the skin is a result of exposure to the sultry heat of the tropics, to the blasting elements of the steppes, or the Arctic regions, or to the more kindly atmosphere of temperate climes. The women of Sparta were and still are noted for beauty, and the cause may be attributed to the climate and good water of Lacedaemon.<sup>3</sup> In localities where the

1. Ellen Semple, *Influences of Geographic Environment, on the basis of Ratzel's System of Anthro-geo-graphy*; New York, 1911.
2. E. Semple, *op. cit.*, Chapter II.
3. H. F. Tozer, *Lectures on the Geography of Greece*; London, 1873; Lect. V., p. 185.



food supply is abundant, the race attains greater size and better development than in places where occasional or frequent famines occur. The occupations which are forced upon a people because of their environment have a strong influence upon the physical development. Distinctive types are developed in mountaineers, mariners, miners, nomads, farmers, and fishermen. The psychical effects of physical environment appear most clearly in language and literature. The symbols, metaphors and other rhetorical forms arise from the experiences of the speaker or writer:- experiences which directly or indirectly are a result of the natural conditions of his acquaintance. The word pictures of the North American Indian of the northern regions of forest and lake corresponded in very few ways to those made by his brother who roamed the barren plains of the South-west. American literature has a trend and a flavor different from literature produced in England, while English writers in India or Africa show characteristics strange to native English or American men of letters. Here the inheritance of racial experiences has been the same, and the differences in literary expression must be caused by difference in environment. Geographic situation affects the size of the social groups and in this way, topography operates upon social and economic conditions. The country which is able to support a dense population from its natural resources has achievements entirely different from those of a country barren and unfavorable to human habitation. The barbarian hordes of the Dark Ages were compelled to leave their native haunts because the arid plains and steppes could not support them, and from their migrations a great change took





place in world history. The greater part of modern history is economic. Great invasions and conquests are incited from the desire of the aggressive people to get away from the limitations imposed upon them by their own physical environment. The effects classified as migratory are concerned with the segregation or accessibility of a people, influencing the chances for travel and expansion. The Swiss, surrounded by their mountains, can never hope to figure in world events in the same way as the English or the Dutch have done. Russia longs for an open sea-coast to supply her great geographical deficiency and her diplomatic and military manoeuvres keep constantly in view the attainment of this goal.

Greece, and especially Athens, has been a favorite field for anthropo-geographists. The short but surpassingly brilliant history of that people, which has influenced all civilization so widely, can never be omitted from any discussion which bears upon the problems of general history. From the time when first the Athenians were recognized as a people of peculiar genius and distinctive attainments, explanations of their mental traits and characteristic qualities were attempted on the basis of their physical environment. It was a pleasing fancy to suppose that there was some relation of cause and effect between the pellucid atmosphere and sharp sea breezes of Athens and the keen unclouded intellect of the Athenian orator or statesman; to imagine that the Athenian sense of dignity and proportion as displayed in art and literature was a result of gazing upon the well-ordered arrangement of landscape around his native city; to suggest that the versatile, imaginative, and creative genius of the



Athenian citizen was an effect of the manifold bounties of land and sea which nature had bestowed upon him.

The Greeks themselves took an interest in studying the influence of natural conditions upon the human inhabitants of a country. The physician Hippocrates<sup>1</sup> wrote a treatise which set forth the connection between climate, water, contour of land and the public health, thus concerning himself with the physical effects of environment. Aristotle<sup>2</sup> made a comparison between the people of Europe and of Asia. The former he characterized as brave but deficient in speculative thought and technical skill, and lacking the power of domination. The Asiatics, on the contrary, seemed to him to be thoughtful and skilful, but without spirit, and hence in a permanent condition of subjection. Then turning his thoughts to his own land, Aristotle concludes that the Hellenic people occupying a central position, where the climate is neither too hot nor too cold, combine the best qualities of each of the other peoples, being at the same time both thoughtful and brave, and for that reason fitted to be political rulers. Theophrastus<sup>3</sup> admits that he is puzzled in trying to explain character, saying, "I have always been perplexed when I have endeavored to account for the fact that among a people who, like the Greeks, inhabit the same climate and are reared under the same system of education, there should prevail so great a diversity of manners."

1. Περὶ Ἀέρων, ὕδατων, τόπων.

2. Politics, IV (VII), 7, 1 and 2.

3. Introduction to the Characters 1-5. Translation by F.C. Felton, Greece, Ancient and Modern; Boston, 1869, p.285





Strabo <sup>1</sup> took a middle course on the question of the influence of physical environment. Altho he admitted the influence of geographic situation in "differentiating dialects and customs in Greece", he believed that certain characteristics of the Greeks were produced by education and institutions entirely apart from any geographic cause.

In considering the city of Athens, several of the ancient Greeks have shown a belief that her physical environment had a more or less strong influence upon her history. Thucydides <sup>2</sup> explained Athens' escape from early invasions on the ground that her poor soil made the country unattractive and, because of this escape from invasion, he believed the Athenians to have remained an indigenous race. Xenophon <sup>3</sup> felt that the situation of Athens was extremely advantageous. Emphasizing the same argument as Aristotle used in reference to all of Greece, Xenophon described Athens as the center not only of Hellas but of the habitable world, adding that the farther a traveller journeyed from this city the worse extremes of climate he encountered. Plato <sup>4</sup> and Aristotle <sup>5</sup> are supposed to have had Athens in mind when they wrote of the peculiar advantages enjoyed by a small separate state. Aristotle's description of the ideal commonwealth as being small enough "to be comprehended at one glance

1. Book VII, Chapters I and II.

2. I, 2.

3. *Πόροι*, 1, 6.

4. Critias, 112.

5. Politics, Book II, Chap. VII; Book IV, Chap. IV; Book VII, Chap. IV.



of the statesman's eye", applies well to the city of Athens.

Many writers since the days of "the Glory that was Greece" have emphasized the importance of Greece's situation and natural advantages in its effect upon her history, asserting that the Greek character was indelibly marked by the influence of environment. The general references which have been made in regard to the effect of the physical environment of Greece as a country, apply in full measure to Athens, the chief city of Greece. Sir William Smith <sup>1</sup> says:- "Of all natural objects, the mountains and sea have ever been the most powerful instruments in moulding the intellectual character of a people. The Greeks were both mountaineers and mariners and as such they possessed the susceptibility to external impressions, the love of freedom, and the spirit of adventure, which has always characterized more or less, the inhabitants of mountainous and maritime districts." E. Curtius <sup>2</sup> in his "History of Greece" is willing to admit that "the history of a nation is by no means to be regarded solely as a consequence of the natural condition of its local habitations"; yet in his "Boden und Klima von Athen" <sup>3</sup> he attaches an extraordinary degree of importance to the physical conditions with which the Athenian citizen came into contact, coming, however, finally to a conclusion which gives something like equal value to the factors of heredity and environment. His final opinion seems to be that for great achievements the right people in the right place is required. <sup>4</sup> Dr. Dondorff, <sup>5</sup> too, does

*History of*

1. Introduction p. 8, <sup>↑</sup>Greece, N.Y., 1868
2. N. Y., 1871, p. 20
3. Berlin, 1877.
4. p. 14. of his Boden und Klima von Athen.
5. Das Hellenische Land als Schauplatz der althellenischen Geschichte, Hamburg, 1889.





not make the geographic influence in Greece paramount, yet he finds many physical conditions of the land which he considers to have been very favorable to the development of Grecian power and greatness. We find that Köster <sup>1</sup> points out many natural advantages which he believes were causes of Athenian qualities of mind and soul. He asserts that the Fates gave the Athenians genius but the conditions of the country modified that genius.<sup>2</sup> "In Greece, geography made itself pre-eminently felt" in the opinion held by Bury.<sup>3</sup> The same author maintains that "the character of their history is so intimately connected with their dwelling places that we cannot conceive it apart from their lands and seas."<sup>4</sup> Grant <sup>5</sup> makes a still more sweeping statement, "The destiny of Athens is stamped on the geography of Greece." In speaking of the effect of physical environment upon the Greeks, Grote <sup>6</sup> says:- "General propositions respecting the working of climate and physical agencies upon character are indeed treacherous, for our knowledge of the globe is now sufficient to teach us that heat and cold, mountain and plain, sea and land, moist and dry atmosphere are all consistent with the greatest diversities of resident man."<sup>7</sup> The author of an extremely popular text-

1. H. Köster, "Über den Einfluss landschaftlicher Verhältnisse auf die Entwicklung des attischen Volkscharakters, Program, Saarbrücken, 1898.
2. Op. cit., p. 4.
3. J. B. Bury, "A History of Greece to the Death of Alexander The Great." 2nd Ed., London, 1913, Introduction p. 4.
4. Op. cit. Introduction p. 1.
5. A. J. Grant, "Greece in the Age of Pericles", N. Y., 1893, p. 67.
6. Geo. Grote, "History of Greece", London, 1869, Vol. II, p. 229.



book of Ancient History, Philip Van Ness Myers,<sup>1</sup> who may be referred to on that account, in passing, says on this subject; "For it is with races as with individuals, men of an extraordinary personality are not the product of education or of circumstances. They are born, not made."

It must be admitted that the situation of Athens had some decided advantages. Greece herself was favorably located. According to Tozer,<sup>2</sup> no other place had such an advantageous position for influencing the world at that time as had Greece, with the exception of the city of Tyre. Egypt and Palestine, he observes, were indeed "nearer to the meeting-point of the three great continents, yet there were insuperable difficulties to prevent either of them from assuming the part which was reserved for Greece." Egypt was too dependent upon the Nile, possessing "neither the power nor the will to influence foreign nations"; Palestine, set apart in her narrow confines had to develop in isolation her own peculiar donations to the world. "But Greece occupied in ancient times a position in many respects similar to that of England at the present day; she was the natural point of communication between the old world and the new; all the arts, all the ideas, all the movements, which passed from the east to the west, must necessarily pass thru her." With this Miss Semple<sup>3</sup> agrees as she states, "The accessibility of Greece and its focal location in the ancient world made it an intellectual clearing-house for the Eastern Mediterranean. The general in-

1. "A History of Greece", Boston and London, 1895, p. 14.

2. Op. cit., Lect. I, pp. 4 and 5.

3. E. Semple, op. cit., Chapt. I, p. 19.





formation gathered there afforded material for wide comparison. It fed the brilliant reason of the Athenian philosopher and the trained imagination which produced the masterpieces of Greek art and literature."

Athens, moreover, besides being situated in a country which as a whole was favorably located, had its position of the eastern side of Greece facing the parts of the world which then were most active. The cities on the western coast of Greece, altho situated in a region of wide, well-watered plains, far more fertile than the plain of Athens, had but small opportunity for intercourse with exterior nations until later times, when progress had moved westward. The western part also was less favored in coastal indentations and neighboring islands than was the eastern part of Greece. According to Köster,<sup>1</sup> Athens, always exposed to the cultural influences of the East because of her situation on a peninsula open on three sides to the sea, enjoyed the advantage of usufruct of her nearest neighbors, the civilized states of the East. The same writer<sup>2</sup> describes her geographic position as "fortunate" because of the well developed coasts which were the cause of her rich commercial life. Dondorff<sup>3</sup> characterizes Athens as situated upon the "mainland, and yet a peninsula, about the middlepoint between the Hellespont, Crete, Rhodes and the Laconian and Thermaic Gulfs...protected by mountain barriers yet open to the freest activity on all sides." He<sup>4</sup> believes that the district of Attica with its surrounding islands was one of those states, such as Laconia

1. Op. cit., p. 5.

2. Köster, op. cit., p. 7.

3. Op. cit., p. 37.

4. Op. cit., p. 16.



and Boeotia, which were specially fitted for hegemony over the surrounding territory.

The islands off the eastern coast were a help to the development of Athens in offering stopping places along the route to Asia Minor, and in this manner aiding commerce. These islands had a place in her history because they were used in time of war as a base for offensive operations against the enemy. Thucydides<sup>1</sup> tells of the Athenian occupation of Cythera as a stronghold against the Lacedaemonians. At one time the island of Aegina furnished so much anxiety to the Athenians that all of its inhabitants were expelled.<sup>2</sup> The island of Euboea, at one period in Athenian history, was so infested with pirates that a cessation of commerce and navigation was caused.<sup>3</sup> Tozer<sup>4</sup> thinks that "these striking and romantic objects exercised a charm over the quick imagination of the Greeks, seeing them as Homer<sup>5</sup> says, "ὡς ὅτε πῖνόν ἐν ἡεροειδέϊ πόρτῳ". " If this be the case, Athens was not lacking in causes for the exercise of the imagination of her citizens.

As to the site of the city itself, "Curtius<sup>6</sup> regards it as "manifold and harmonious." Tozer<sup>7</sup> says, "Athens, on its altar-shaped rock, which forms, as it were, the eye of the plain in the midst of most classical mountains, and looking out towards the blue sea, seemed the natural home of art and the seat of

1. IV, 54, 55.
2. Ibid., II, 27
3. Demosthenes, De Cor., 241.
4. Op. cit., p. 183.
5. Od. V, 281.
6. Op. cit., p. 5.
7. Op. cit., p. 183.





maritime dominion." We have mentioned before that various ancient authors looked upon Athens as occupying a central position in Greece and in the world. Modern writers express the same idea; as, for example, Curtius,<sup>1</sup> who says, "one feels Athens to be the center of Greece." Transferring this idea to a smaller unit, Dondorff<sup>2</sup> argues that the central plain of Athens "of itself brought the unity of the whole land", coming into contact with Boeotia by way of Marathon and with the Megaria by way of Eleusis. He asserts that the arrangement of land and sea all tends to a unity, that Laconia and Attica became the central points in Greek history because they alone possessed in their situation both unity and independence. He makes a comparison of the situation of Athens with that of other Grecian cities, finding that Athens was superior to Laconia because she was not so shut in as was the latter; she had an advantage over Argolis and Ionia because of the unity and unbroken condition of the land around Athens; she excelled Boeotia because of her extended position and better frontier protection. Corinth alone, in his opinion, was able to equal Athens in all these advantages but she was inferior in not having access to as much land as did the city of Athens. Athens, he declares, was a combination of island, peninsula, and isthmus, enjoying the advantages of each; she was "the crown of the Greek land, the natural head of Hellas"<sup>3</sup> Comparing the elevation of Athens with that of other Grecian cities, Curtius<sup>4</sup> concludes that it

1. Op. cit., p. 7.
2. Op. cit., p. 38.
3. Dr. Dondorff op. cit., p. 38.
4. Op. cit., p. 7.



is almost perfect, Acrocorinthus and Ithome being too high and Thebes and Sparta too low for the best results. Dondorff<sup>1</sup> sees advantages in the situation of Athens far enough from the sea for protection against pirates, yet near enough for commercial purposes. In direct opposition to this view, Bury<sup>2</sup> says, "The position of the Acropolis was a fatality to Athens; it was too far from the sea and at the same time too near", making necessary the fortification and defense of two towns within five miles' distance of each other. Dondorff<sup>3</sup> claims also that the high position of the land and the fresh sea air gave to the Athenians "health, physical refreshment and intellectual alertness." Curtius<sup>4</sup> rather romantically insists that the situation of Athens inspires one with the feeling that "Nature has selected it for something special."

Athens possessed two harbors. Phalerum, the more easterly of the two, was used as the chief harbor up to the time of the Persian Wars. The other, "the very favorable Piraeus", as Koster<sup>5</sup> calls it, was situated on a peninsula about five miles southwest of Athens. Themistocles, in inaugurating his naval policy, persuaded the Athenians to fortify and make use of this harbor, which had been neglected until that time. Tozer<sup>6</sup> commends the "closed harbor of Piraeus" as "safe, deep, and spacious." Curtius<sup>7</sup> grows enthusiastic upon it as a harbor

1. Op. cit., p. 33.
2. Op. cit., p. 330.
3. Op. cit., p. 4.
4. Op. cit., p. 5.
5. Op. cit., p. 9.
6. Op. cit., p. 243.
7. Op. cit., p. 12.





"than which no fantasy could paint a finer." In addition to this, Miss Semple <sup>1</sup> believes that the Piraeus had a "focal significance" in ancient Aegaeon trade.

The mountains of Greece are one of the predominating physical features of the land. They divide the country into a number of independent localities which are thus cut off from easy communication with each other except by sea. In this way, the mountains are held responsible for the lack of unity in political organization in Greece, and also for the fact that the Greeks took to the sea as the principal means of intercourse. There are three prominent mountains in the vicinity of Athens:-- Parnes, Pentelicon and Hymettus; while the four hills -- Acropolis, Areopagus, Pnyx and Museum, formed part of the city itself. Curtius <sup>2</sup> gives the mountains around Athens the function of supporting springs, but this function must have been but poorly performed, since there were very few springs thus supported. Curtius <sup>2</sup> also claims that these mountains, attaining greater height in the north, served to shut out the Boeotian fogs, and in addition saved Athens <sup>from</sup> hostile invasions. In describing the mountains near Athens, he says that there is a union of solidity and variation in these mountains; everything is in harmony, yet not so uniform as to become monotonous. Even <sup>the</sup> lower mountains to him displayed a character of majesty. If no other virtue can be found in them, he points out that they furnish exercise for the muscles and the lungs. <sup>3</sup> Koster <sup>4</sup>

1. Op. cit., p. 304.
2. Op. cit., p. 5.
3. Op. cit., p. 7.
4. Op. cit., p. 16.



finds yet another advantage in the mountains which "rose here and there like an amphitheatre, giving them a model for the structure of temple and theatre."

Athens was not well supplied with streams. The Cephissus, supported by springs on the side of Parnes, furnished a comparatively constant supply of water and was the only perennial river in Attica. Strabo<sup>1</sup> speaks of it as having been completely dry in summer during ancient times but he may be mistaken in that statement since other evidence does not support it. The Ilissus is a "mere brook", which is almost completely dry in summer. Curtius,<sup>2</sup> in his efforts to find usefulness in everything connected with Athens, assigns to the Ilissus the service of acting as a moat on the east. Athens was troubled by scarcity of water. Neumann and Partsch<sup>3</sup> state that the scanty watersupply early compelled the Athenians to organize an elaborate system of water-rights which were placed under the supervision of a board of ὀδᾶτων ἐπιτοῦται.<sup>4</sup> The inhabitants made use of

1. IX, 1, 24.

2. Op. cit., p. 6.

3. C. Neumann and J. Partsch, *Physikalische Geographie von Griechenland mit besonderer Rücksicht auf das Altertum*, Breslau, 1885, pp. 84-85.

4. The original sources of this information are given by Dr. Gustav Gilbert (translated by E.J. Bfooks and T. Nicklin) *The Constitutional Antiquities of Sparta and Athens*; London, 1895; I p. 249.

Plut., Them., 31 speaks of Themistocles as a member of the board of ὀδᾶτων ἐπιτοῦται dealing out punishments to those stealing water or turning it aside from its course.

Plut., Sol., 23 regulations about the use of wells are cited. The inhabitants should use the public wells if within four furlongs of them; if farther away, they should try to dig their own well. If unsuccessful after digging ten fathoms deep, they might get 4 1/2 gallons a day from their neighbors' wells.





cisterns to preserve the water from one rainy season to the next. Koster <sup>1</sup> says that excavations on the Pnyx show the remains of a large number of these cisterns. An irrigation system, drawing water from the springs of Pentelicon is said to have been established as far back as the time of Solon.<sup>2</sup> The Kalirrhoe is described as the only wellknown spring in the whole country.

The ancients recognized that the climate of Greece was not ideal, yet they strove to find advantages in the effect of their climate upon the inhabitants. Herodotus,<sup>3</sup> Hippocrates,<sup>4</sup> and Aristotle <sup>5</sup> agreed that the climate of Asia was more kindly to animal and vegetable life, but more enervating than the climate of Greece. Ancient writers in general spoke of the variability of temperature which they regarded as beneficial in hardening the body and stimulating the intellect. In a comparison between the Greeks of Asia<sup>a</sup> Minor and the islands and those living in Greece proper, Hippocrates <sup>6</sup> remarked that body and spirit could not grow strong where there were no sharp changes of heat and cold. Not a few of the ancient Greeks commend the climate of their native land. Herodotus <sup>7</sup> in one place says that it is the best tempered climate in the whole world, counter-

1. Op. cit., p. 12.
2. Note 4, p. 15, of this paper.
3. 1, 142.
4. Op. cit., c. 12-13.
5. Politics XII, 6, 1.
6. c. 16, p. 62; for similar remarks, compare c. 12, p. 54 and c. 19, p. 72.
7. III, 106.



balancing the excellence of products from the ends of the earth. Another ancient Athenian <sup>1</sup> states that the position of his native land is among the best, "its excellence consisting in winter and summer being equally tempered." The Attic dramatists and poets always eulogize the climate of Athens, yet much of their enthusiasm may be due to the natural tendency found among all peoples to regard as most excellent and pleasing those particular manifestations of Nature which have surrounded them from infancy. Scott expresses the general sentiment toward one's native country when he says:

"O Caledonia! stern and wild,

Meet nurse for a poetic child!"

The native land, no matter what its conditions may be, is always considered as a "meet nurse" for her children, developing in them all the most desirable qualities of body and mind. Moreover, in considering the testimony of these Athenians, it must be borne in mind that all writers, and poets in particular, tend to dwell upon the pleasing moods of Nature; that even when her harsher aspects are considered, men of letters on account of their artistic sensibilities are prone to take the most favorable view possible. It is well-known that most literature of the more aesthetic type tends to romantic treatment instead of to realistic portrayal of the real conditions of life.

That the ancient writers were prejudiced in favor of their native climate is borne out by a consideration of the

1. Epinomis, p. 987. This work was probably written by Philippos of Opus but is sometimes credited to Plato.





climate of Athens at the present day. It is almost universally conceded that the climate of Athens is not now ideal, and there is small chance that it has suffered any great changes since the time of the ancients. Even Curtius <sup>1</sup> admits that there is more heat there than one would expect, and that this heat is not alleviated by cool sea breezes as much as is usual with sea-coast cities. At Athens, the variation in temperature is very great, the difference between the temperature of January and of July being as marked as it is in Leipzig or Berlin.<sup>2</sup> Thru the summer, the heat is continuous. Sometimes a whole month passes in which the temperature is never lower than 68° F.<sup>3</sup> Neumann-Partsch <sup>4</sup> state: "In the four months of summer there are combined in the Attic plain the very worst conditions for vegetation - burning heat, drouth, scanty clouds which might at least temporarily modify the action of the sun, extraordinary dryness of the air, and finally the increasing difficulty, indeed for many spots, the absolute impossibility, of irrigation." In Athens, the sand heat tested in the sun and at a time when there was no breeze registered 69° Centigrade and once 71° Centigrade.<sup>5</sup> In addition to intemperate heat, the climate of Athens has the disadvantage of being subject to sudden changes. It is a common occurrence in all Greece for a variation of 24° - 25° to take place in a single day.<sup>6</sup> In opposition to the opinions held by other writers, Köster <sup>6</sup> believes that Athens has an excellent

1. Op. cit., p. 9.

2. Neumann-Partsch, op. cit., p. 17.

3. E. Abbott, A History of Greece, 1st ed., N. Y., 1901, p. 18. Note.

4. Op. cit., p. 30

5. Neumann-Partsch, op. cit., pp. 19 & 20.

6. Op. cit., p. 15.



climate, displaying a nice mixture of seasons. "The seabreezes", in his opinion, "made possible to the mind its activity and resilience." He considers the climate wholesome, and even tho the winds were raw, he believes that their effect was to make the Athenian hardy, in contrast to the usual effeminacy of the Ionians. Curtius <sup>1</sup> also praises the climate on the ground that it permitted life in the open air during the entire year, making for intellectual as well as physical health. To this condition, he attributes the fact that Athens made the community rather than the home the basis of action.

The atmosphere of Athens has always attracted attention. Aristides <sup>2</sup> says that to one approaching Athens, the light seems to take on an unwonted brightness, as if a mist had been lifted from the eyes. Euripides <sup>3</sup> refers to it when he describes the Athenians as "ever walking gracefully thru the most luminous ether." Following the old theory of the ancient Greeks, Köster <sup>4</sup> credits the bright light of Athens with helping clear-thinking and in this way giving an impetus to science. In addition, he declares that the atmosphere, making details distinct and bathing everything in a searching light, was the cause of the wonderful skill in plastic art displayed by the Athenians. Tozer <sup>5</sup> sees an effect of the atmosphere upon the language, saying, "The clear atmosphere of Attica bestowed on that country a dialect of its own, forcible, terse, and logical." Still

1. Op. cit., p. 11.

2. Panath., p. 97, ed. Jebb.

3. Medea, 829.

4. Op. cit., p. 14.

5. Op. cit., p. 190.





another effect is discovered by Neumann-Partsch <sup>1</sup> who assert that the brightness of the air rendered distinctions in distances very difficult and this natural condition was responsible for the weakness in perspective shown in drawing.

The remains of the Temple to the Winds at Athens furnish valuable information as to how the ancients regarded these winds. Only the three winds Zephyrus, Apeliotes and Lips were portrayed as mild or favorable. Boreas was pictured as a stern man blowing a conch-shell, a representation of the Athenian idea of the stormy northwind. This wind blows on an average one hundred and seventy-eight days a year <sup>2</sup> and is very violent. "The Northeast and the North wind", state Neumann-Partsch, <sup>3</sup> "bring in winter the most stinging cold." The mythological story of the carrying off of Orithyia by Boreas represents the dispersion of the fertilizing river-mists by the chill north wind, <sup>4</sup> a common occurrence at Athens. The southwind, Notus, was regarded as dangerous and especially hostile to navigation; the two other north winds, Sciron and Kaikias were both stormy. Eurus was the Greek name for the south-east wind now called Scirocco. The word Eurus from the root  $\alpha\upsilon\omega$ , to burn, was a fit name for this wind called "the most parching and enervating of all the Mediterranean winds." <sup>5</sup> The Scirocco at Athens is usually a very hot wind and increases discomfort by bringing with it clouds of dust. <sup>6</sup> On August eleventh, 1861, the temperature of

1. Op. cit., p. 39.

2. Curtius, op. cit., p. 9.

3. Op. cit., p. 104.

4. Tozer, op. cit., p. 147.

5. Tozer, op. cit., p. 151.

6. Neumann-Partsch, op. cit., p. 116.



this wind was 41° Cent.<sup>1</sup> Curtius<sup>2</sup> says that, in spite of being disagreeable, the winds kept the air pure and clean. He recalls the stand taken by certain Athenians criticizing the walls built by Pericles on the ground that they had caused a pestilence by shutting out the good effects of the winds. It is agreed that a moderate amount of wind is wholesome, but Athens must have been granted more disagreeable winds than is necessary for purposes of health, and it is especially hard to believe that a parching dust bearing wind like the Eurus could be at all favorable to human life in any respect.

The lack of rainfall at Athens was and is one serious disadvantages which can not be denied. Evelyn Abbot<sup>3</sup> states: "In the year 1859 there were only twenty-five days in the year on which sufficient rain fell at Athens to be measured by the gauge." Neumann-Partsch<sup>4</sup> quote the results of observations made at Athens by Herr J. Schmidt covering a period of twenty-two years. The average rainfall during that time was 408 mm. per year. Seventy-eight percent of this amount fell between the months of October and March, from June to August only seven percent. There is never any certainty at Athens about the amount of rainfall nor the time when it occurs. Sometimes heavy rains fall in the summer, then again there is an absolute drought during those months. Herr. Schmidt noted twelve occasions when the month of August had no rainfall at all and seven times when July had no rain. The shortest drought occurring

1. Neumann-Partsch, *Op. cit.*, p. 116.
2. *Op. cit.*, p. 10.
3. E. Abbot, *op. cit.*, p. 18.
4. *Op. cit.*, pp. 21, 22, 23.





during the twenty-two years covered thirty days, while the average drought lasted fifty-five days. Rainclouds pass over Attica but the heat there prevents condensation and falling of the moisture. Plato in the "Critias",<sup>1</sup> made note of another disadvantage in connection with rainfall, i.e.,-the inability of the soil to absorb the moisture which fell. In describing the Golden Age of Athens' past, he says, "Moreover the land enjoyed rain from heaven year by year, not, as now, losing water which flows off the earth into the sea." Another unfavorable condition is recorded by Struck,<sup>2</sup> who shows that Athens possesses the lowest humidity in all Greece, its average being only 61%.

In scenery, Athens enjoyed with the other cities of Greece a landscape described by Tozer<sup>3</sup> as "classical." The scenery of Greece is distinguished by purity of outline, by lack of "riotous profusion" in vegetation, by artistic arrangement, by good light effects, and delicate coloring. Athens might boast of advantages over the inland cities of Greece on account of her outlook on the sea, thus giving her a combination of mountain, plain and sea in the composition of her landscape, yet she shared this advantage with many other cities. In one of these elements of scenery, Curtius<sup>4</sup> seems to see exceptional merit, calling the plain of Athens, "a well marked work of art", yet he does not indicate in what particular conditions the "art" lies and other observers have failed to see in it anything that

1. Ill d. trans. by B. Jowett.

2. Adolf Struck, *Zur Landeskunde von Griechenland*; Frankfurt, 1912, p. 42.

3. Op. cit., p. 165.

4. Op. cit., p. 6.



makes a more powerful appeal to their aesthetic tastes than do scores of places in Greece. Many writers have revelled in picturing an Athenian sunset, dwelling upon the loveliness of coloring on Hymettus and the general effect of refined beauty and calm sublimity. These beauties may be there, yet it will always be a matter of speculation as to how much the imagination adds to the picture, and furthermore beautiful sunsets are common to all of Greece and those at Athens are probably not exceptional. Neumann-Partsch<sup>1</sup> hold that the fine blue of the sky helped to give the inhabitants their love of color. This same sky, says Curtius,<sup>2</sup> "sharpened the observation, made the eye clear and the spirit light and cheerful."

Not many virtues may be found in the soil of Athens even by her most enthusiastic admirers. The ancients frankly admitted the poverty of her soil. Plato<sup>3</sup> states that in his time only the skeleton remained of the rich soil of prehistoric days which was washed away by deluges. Describing conditions which prevailed in general throughout Greece, Demaratus<sup>4</sup> says to Xerxes, "Want has at all times been at home in our land." Since Attica was probably the least fertile district of the whole peninsula, this statement must have applied with double force to her. In the ancient rental laws, special provision was made against the removal of soil from a field.<sup>5</sup> The soil was so thin that if the top layer was removed, the usefulness of the land was entirely destroyed. Thucydides,<sup>6</sup> Strabo,<sup>7</sup> Dio Chrysostom<sup>8</sup> and other

1. Op. cit., p. 37.

2. Op. cit., p. 11.

3. Critias, lll d.

4. Herodotus, VII, 102.

5. C. I. G., 93.

6. I, 2.

7. VIII, 1.

8. Or. 6, 2.





Greek writers give disparaging accounts of the soil of Attica. The plain of Eleusis with its wheat fields was the only really fertile region in the whole land. According to Greek mythology, it was there that Demeter first gave Agriculture to man. However, the rest of the district today seems to have derived no benefit from Mother Nature's gift. The level land is either barren plain or useless swamp, discouraging the thought of cultivation in the past or hope of fruitfulness in the future. The hillsides furnish a somewhat scanty pasturage for goats, but this does not recommend them for productivity, as it is well-known that the goat and the donkey live where no other animal could support existence. In the case of the soil, those who wish to make every condition conspire to the advantage of the Athenians are forced to take the stand that benefits were derived from circumstances usually considered most unfavorable to man's best development. We find Dondorff <sup>1</sup> asserting that the character of the land demanded "industry, sobriety, and moderation", which were permanent characteristics of the Athenians. Again, <sup>2</sup> he thinks the poor soil was a blessing because it left the inhabitants no chance to grow "unnerved thru the riches of Nature." With the same idea in mind, Koster <sup>3</sup> says, "There was no seduction of fruitful land ... in Attica, Nature forced man to strain and think." Curtius <sup>4</sup> speaks of the "necessity for human labor", the demand for great exertion to obtain a comfort-

1. Op. cit., p. 34.

2. Op. cit., p. 12.

3. Op. cit., p. 10.

4. Op. cit., p. 8.



able livelihood. Later,<sup>1</sup> he maintains that Nature gave all that was required with "motherly fidelity." He suggest that this "fidelity" partook freely of the characteristics belonging to the stock-figure of the step-mother in fairy tales. He also assigns to the poverty of soil the cause for development of commerce,<sup>2</sup> because of the necessity for supplementing home production.

With regard to the products of the land around Athens, those who seek to prove that Athens was singularly favored in every particular must emphasize quality rather than quantity. Products of all kinds were scarcely sufficient to supply the inhabitants, oil for example being the only product which the ancient laws of Solon allowed to be exported.<sup>3</sup> Attica produced so little cereals that they never sufficed for home consumption and grain was early imported from the Pontus.<sup>4</sup> In discussing the present-day products of Greece, Struck<sup>5</sup> does not include Attica at all in his list of districts producing wheat, barley, corn, or oats. The Attic plain is credited with producing legumes and potatoes but Herr Struck<sup>6</sup> shows that the amount produced in all Greece is quite insignificant. In Attica, "the fruits and vegetables tasted better than those of all other lands" is a statement made by Curtius,<sup>7</sup> yet he does not furnish evidence for his assertion. If it is drawn from an ancient source such as Plato's "Critias" where a similar statement is made, the idea might be a

1. Ibid., p. 9.

2. Ibid., p. 12.

3. E.Abbot, Op. cit., p. 13.

4. Dondorff, op. cit., p. 13.

5. Op.cit., pp. 92, 93.

6. Op. cit., p. 94.

7. Op. cit., p. 11.





result of personal prejudice in favor of all things connected with one's native land, or the scarcity of supply may have occasioned an increased enjoyment of the delicacies when obtained. Olives, figs, and grapes were produced in Attica but not in great abundance nor did Attica excel other districts in their production. Sophocles <sup>1</sup> asserts that Attica is the land in which the olive flourishes best, yet ancient laws against the cutting down of olive trees and wasting of the oil on any pretext show that the supply was so limited as to demand economy.<sup>2</sup> Figs may have been produced rather abundantly in Attica, yet Herodotus <sup>3</sup> shows the small value attached to figs when he says of a country, "παρ' οἷς σῦκά ἐστιν οὔτε ἄλλο ἀγαθὸν οὐδέν." Sheep and goats were raised in Attica. The wool from Attic sheep was considered next in grade to the Milesian.<sup>4</sup> Horses and cattle had to be imported.<sup>5</sup> Marble, clay and silver were found in the vicinity of Athens. Pentelicon was famed for white marble, Hymettus for blue, and these quarries furnished the marble for Athenian buildings and statuary. Clay was found at Kolias and other places and was used for pottery. The pottery industry was quite ancient and Attic pottery is said to have been widely exported.<sup>6</sup> It is known that a quarter of the city of Athens drew its name from this industry. One of the most important products of Attica was the silver drawn from the mines at Laurium. Tozer<sup>7</sup> says that silver was the most important

1. Oed. Col., 700

2. C. I. G. 93.

3. I, 73. 71

4. Köster, op. cit., p. 13.

5. Dondorff, op. cit., p. 34.

6. Dondorff, op. cit., p. 34.

7. Op. cit., p. 127



metal at that time for purposes of exchange in Greece. This silver was one of the largest sources of revenue for the Athenian state, making possible the equipment of a fleet at an important time. Aeschylus <sup>1</sup> puts in the mouth of the chorus a eulogy on Athens, describing it as possessing a fountain of silver. Neumann-Partsch <sup>2</sup> mention that large deposits of iron ore were in the Laurium district also, but that the ancients made practically no use of them. There is only a vague tradition upon which to found the belief that Attica was ever a well-wooded country. Plato <sup>3</sup> gives the impression that Attica in his day was almost as bare of trees as it is now. The deme of Acharnae seems to have been a wooded region, since it was famed for its charcoal.<sup>4</sup> This charcoal burning on the slopes of Parnes is mentioned by Neumann-Partsch <sup>5</sup> as the only wood industry known to have been carried on in Attica in antiquity. Lumber for ship-building had to be imported from other portions of Greece or from abroad.<sup>6</sup> Köster <sup>7</sup> calls the sea near Athens "rich in fish." Dondorff <sup>8</sup> gives a similar report when he states that fishing and purple fishery furnished the people of the coast of Attica their livelihood. Yet there is mention in ancient sources of the importation of saltfish from the Propontis to Athens.<sup>9</sup> Honey made by the bees from the thyme on Hymettus was a famous product

1. Pers., 235.

2. Op. cit., p. 232.

3. Critias III c.

4. Tozer, op. cit., p. 155.

5. Op. cit., p. 359.

6. Köster, op. cit., p. 8.

7. Ibid., p. 9.

8. Op. cit., p. 35.

9. Eupolis, Fr. 23, ed. Meinecke; Stephanus Byzantinus, s.v.





of Attica, but along with the majority of her products, could not be regarded as a source of national wealth.

In order to arrive at some conclusions, let us consider, following Miss Sample's outline of the effects of physical environment, how that of Athens may be said to have affected the inhabitants. First, as to the physical effects, we need take into account in regard to the Athenians only such physical effects as may have influenced their character in relation to their history. The high position of the land, the service of the mountains in shutting out Boeotian fogs and in furnishing exercise for lungs and limbs, the fresh sea breeze, the mildness of the climate permitting open air life and the extremes of temperature,--all these conditions have been regarded as agencies promoting health and vigor. The beneficent effects of some of these features we feel might be called into question, but aside from that, none of these characteristics is peculiar to Attica or especially to the Athenian plain, but singly or in like combinations they are to be found in many other cities of Greece. The climate of Athens, moreover, should have produced less beneficial results upon the physical well-being of her citizens than did the climate of other cities of Greece, since rawness of air, variability of weather, and long periods of drought and of excessive heat are to be considered as detrimental rather than helpful to physical development. The advantages of open air life and pure atmosphere Athens enjoyed to no greater extent than neighboring cities. The idea that the Athenian sky caused the eye to be clear and the observation to be sharpened must be regarded as largely fanciful. We grant that the combi-



nation of the various climatic and geographical conditions of Attica were such as to allow the inhabitants to be a reasonably healthy and stalwart people, yet we have no evidence to favor a conclusion that the Athenians were exceptional in these respects. All the Greeks cherished the ideal of a sound mind in a healthy body, and we have no reason to infer that the citizens of Athens surpassed their countrymen in physical vigor or development. On the other hand, the adverse conditions of poor soil and insufficient water supply undoubtedly would have proved a serious physical detriment to a people less skilful and ingenious than the Athenians, who knew how to <sup>o</sup>ffset and overcome the limitations of their environment.

The opinions of several writers regarding the effects of environment upon the Athenian mind have been set forth in the preceding pages. We have noted that the practice of moderation, the sense of symmetry and the appreciation of beauty were characteristics of the entire Greek race and that these characteristics have been explained as results of the clear and fine<sup>e</sup> outlines of Greek landscapes. In our brief treatment of the scenery of Athens, only one characteristic was discovered which ancients and moderns have agreed upon as found at Athens in a higher degree than in other localities of Greece. Mountain, sea, and plain entered into the composition of most Greek landscape, and Athens possessed no exceptional beauties with regard to these elements of scenery, but in the clearness and translucency of her atmosphere she is distinguished above other cities. Cardinal





Newman<sup>1</sup> says, "Many a more fruitful coast or isle is washed by the blue Aegean, many a spot is there more beautiful or sublime to see, many a territory more ample, but there was one charm in Attica which in the same perfection was nowhere else." He speaks of the "special purity, elasticity, clearness, and salubrity of the air of Attica, fit concomitant and emblem of its genius." Many and varied are the effects assigned to this natural condition. It is supposed to have been an active factor in producing love of color, cheerfulness, weakness in perspective, keenness of intellect and sharpness of wit. Considering this seriously, it seems ridiculous that one conspicuous natural feature, differing not in kind nor even materially in degree from what was universal in Greece, should be considered as the cause of nearly all the distinguishing characteristics of the people. It astonishes us that the same writers who have claimed that all these qualities are a result of atmospheric brightness have not also explained the maritime industries of Athens by saying that the Athenians felt at home on the sea where the reflection of the sun's rays from the waves reminded them of the intensified light of their native city. And if fancy is to be given free rein, why have they not suggested that the vivid color of the sky combined with the bright light of Athens, encouraging a love of similar things, awoke in the Athenians the greed for the shining pieces of money which caused public funds to be diverted widely to private use during a certain period in

1. John Henry Newman, *Historical Sketches*, Vol. III, p. 20; published at N. Y. and Bombay, 1899.



their history? It must be admitted that the Athenian mind was probably quickened and fed by that contact with the culture of the East which was readily afforded by the situation of Athens. Nevertheless we insist that their original mental ability was not essentially changed nor greatly developed because of the advantages of location, for their period of pronounced commercial activity and of intimate communication with the whole civilized world came at a time after the distinctive qualities of the Athenian mind had already made their appearance. In addition, numerous other cities had the same advantages of intercourse with the East and this intercourse never developed in them the qualities which distinguished Athens. The advantage mentioned by a few writers of the quickened imagination derived from an outlook upon the sea and nearby islands, was also an advantage shared with numerous other cities on the coast of Greece. The effect of seabreezes as a stimulant to mental activity should not have been confined to Athens alone, and in like manner the service of mountains in affording models for architecture was by no means offered to this one city only. This latter idea connecting mountains with the development of architecture is absurd. Mountainous countries have never shown special aptitude in construction nor devotion to the art of building. The Egyptian pyramids, works whose massiveness and enduring qualities well might have been suggested by mountains, were built in a land where towering summits and lofty peaks are unknown. In Russia and in China, countries which as a whole may not be considered mountainous, sciences of architecture with their own individual characteristics have been developed. On





the other hand, the influence of the Alps seems to have given no impetus to architecture, since Alpine regions are not distinguished by any remarkable skill or interest in the art. Tozer's belief that the atmosphere of Attica caused the development of a dialect of peculiar forcefulness, terseness and logic seems highly visionary. In the first place, as far as terseness is concerned, Doric was certainly more terse than Attic Greek; and as for logic, Archimedes had no difficulty in composing his mathematical treatises in the Doric of Syracuse. Nor can it be claimed that any one dialect, in and of itself, is more logical than another. In the second place, it indeed requires a "quickened imagination", such as the Athenians themselves are said to have possessed, to be able to discern what connection air may have with the expression of human thought. This idea, of course, is an outgrowth of that ancient fantastical theory of the effect of air upon intellect. Modern psychology would encourage this belief only slightly in connection with the general theory of the effect of the physical nature of man upon his intellect. Hence, atmosphere could affect mind only indirectly, exerting an influence first upon the body and then by causing bodily reaction having a secondary effect upon the mind. Therefore, this psychological basis does not warrant a conclusion that atmosphere can exert a strong positive influence upon intellect.

Several writers have expressed the opinion that the unfavorable quality of the soil around Athens was an active agent in developing moderation, sobriety, and industry in the people. They consider as significant the fact that the Athenian had to make a conscious and sustained effort in order to wrest from





Nature her gifts, so that there was little chance for him to be seduced by luxury. We are not willing to admit the "sweet uses" of adversity in every case without reservation. In this application, it does not seem reasonable to class as favorable to the people of one district a condition which has always been considered extremely detrimental to all other peoples of the world. Soil productivity has been considered universally as an invaluable asset and unfruitfulness of land a serious drawback to the progress of any people. Moreover, as to the effects of a barren soil upon the character of those who till it, we doubt that the results are such as are claimed for the Athenians. On the contrary, the discouragement caused by a realization of the small returns for the toil expended, instead of causing or promoting industry and thrift tends to exterminate these virtues. It is in the less fruitful countries that the inhabitants show a general tendency to sloth and laziness, of course, excepting from this statement those peoples who live in tropical countries where excessive productivity and extreme heat combine to exclude either necessity or inclination for exertion. It is true that sobriety and moderation are virtues forced upon a people whose soil is ungrateful, yet the virtues do not become permanent as a rule; for it is noticed that peons and poverty-stricken peasants indulge in the most reckless prodigality and dissipation when an opportunity offers itself to them. So it is not logical to believe from the fact that the Athenians had poor soil and also displayed in their character the qualities of industry, sobriety and moderation that the one condition was the cause of the other, particularly when general evidence does not support



the theory. Those who have advanced claims of this kind remind us of the pious sentimentalists, who stifling honest lamentation and condemning "divine discontent", take upon themselves the thankless task of pointing out the blessings in every circumstance attending their own lives and those of their neighbors. Adversity may have either a good or an evil result, the exact outcome in each case depending upon a variety of circumstances. But this much may be asserted,--that adverse conditions usually produce no new traits of character but only affect what is already there. We fail to see in this case any reason why poverty of soil should have aided in any marked degree the development of the Athenian qualities of industry, sobriety and moderation.

It is hard to determine what were the economic and social effects of environment upon Athens, for at an early stage in her history the Athenian people advanced to the stage of mastery over natural conditions. However, the economic resources of the country were as a whole by no means remarkable. Her rather favorable commercial location and her excellent harbor were not made use of until a comparatively late stage in the national development. Even aside from that fact, her commercial situation was inferior to that of Corinth in her own country and surpassed in advantages for purposes of trade by outside cities such as Miletus, Rhodes, or Smyrna. A glance at the map is sufficient to prove that Athens was somewhat "pocketed" in her situation, that she was a little sidetracked from the main routes both by sea and by land. Mr. Jesse E. Wrench<sup>1</sup> of the

1. The Historical Geography of Greece, Historical Teacher's Magazine, 1914, Jan. 17th. pp. 20-22.





University of Missouri points out that it was at Corinth that the three great trade-routes centered, - "the trade from the East and the Hellespont, from Asia Minor, and from Egypt and Syria." To touch at the Piraeus trading vessels had to go out of their course. Although Miss Semple praises the "extended position" and the "focal location", it is hard to see that these advantages apply to Athens to any great extent. It would have been more advantageous to Athens had she been situated in a still more "extended position", on the eastern point of Sunium for instance. As to "focal location", Mr. Wrench names as the "three Keys of Greece" the Thessalian port Pagasae, Chalcis, and Corinth, cities which were manifestly superior to Athens in the strategic importance of their situation. Considering now the inland trade routes, it is found that, altho there were four roads leading into Attica, none of these was a main road. It was Thebes which had the best position with regard to inland commerce thru her situation at the division point of the great road from the north whence one branch went south to Corinth and the Peloponnese and the other led southeast to Athens.<sup>1</sup> Although Athens did not have exceptional advantages in her position, she offset her limitations in the most skilful manner, as is seen by her establishment of the colony of Amphipolis to catch the "trade from the central Balkan peninsula and the middle Danube",<sup>1</sup> by her making use of Oropus in Boeotia as a northern port and of Pagasae as an outlet to the Corinthian Gulf and to gain control of the land routes from the Peloponnese, and by her alliance with Plataea to assure for herself control of the routes from Boeotia

1. Jesse E. Wrench, op. cit., p. 22.



to Attica.<sup>1</sup> Therefore, her success in commerce is to be attributed not so much to natural facilities and advantages as to Athenian ingenuity in making use of every possible condition, favorable or otherwise, to aid their advance. Athens was also at a marked disadvantage from the fact that she had no great productive hinterland for which to serve as an outlet. Attica herself, as we have seen, was not a rich and productive country nor did she have easy access to other districts so as to have the benefit of their products by inland routes of transportation. Altogether, the advantages attached to the situation of the region of Attica are plainly general advantages and as such were shared by nearly all of the neighboring regions. Athens was not more "favored in coastal indentations", nor more influenced by neighboring islands, nor more "exposed to the cultural influences of the East" than many other cities on the eastern coast of Greece. By no means was she the only city in Greece which was "protected by mountain-barriers yet open to the freest activity on all sides." Dondorff describes the district of Attica as one of those states which were specially fitted for hegemony. This statement is such as should be used in connection with the mention of most of the so-called advantages of Athens' physical environment,--she was one of several, and most often of many, cities which enjoyed the same favorable conditions. Favorable comments upon the site of the city have been influenced to some degree without doubt by the historical associations connected with Athens, and the advantages have been unconsciously exaggerated. The beauty of any spot is enhanced by a knowledge

1. Jesse E. Wrench, op. cit., p. 22.





of certain pleasing or romantic occurrences which have taken place there. For that reason, no one knowing the illustrious past of Athens could look upon her scenery and landmarks with an unprejudiced eye. The idea of the central position of Athens has no particular significance since it was central only relatively from north to south and not at all central from east to west. The city of Corinth was situated in a much more central position than was Athens. We fail to see what special advantage is attached to the unity of land which Dondorff emphasizes in connection with Athens. He seems to believe that unity of land caused national unity, saying that Laconia and Attica became the central points in Greek history because they alone possessed in their situations both unity and independence. It is reasonable to presume that the segregation from her sisterstates had an effect upon the independence of Athens as it did upon all the Greek states, but what are the grounds upon which to base a belief that unity of physical features, in whatever that may consist, produces unity of political organization? Dondorff's comparison of the situation of Athens with that of other leading Greek cities, brings out these virtues which he attributes to the situation of Athens: a degree of accessibility, unity and an unbroken condition of the land, extended position, frontier protection and access to land. The three former so-called advantages have been treated in the preceding pages. With reference to frontier protection, that of Athens failed to serve its purpose; since there is no record of an enemy being repelled from the city by means of the natural defense furnished by the situation. On the other hand, it is known that the city was





invaded and burned by the Persians, and that it was entered by several other armies upon different occasions. The assertion that Athens had access to more land than did the city of Corinth is hard to believe, but even if that should be true, the quality of the Athenian soil was so poor that intensive cultivation was utterly impossible. Hence, a large amount of Attic land would balance in products with a much smaller quantity of more fertile land.

The products of Athens, as we have seen, were limited. She was greatly deficient in cereals and lumber, two staple products which are intimately connected with the welfare of a people. Cereals furnish the greater part of the subsistence of nearly all living creatures and are indispensable to man. Lumber also is quite essential not only thru furnishing the material for structures and implements of various kinds, but, more important still, for ships<sup>5</sup>. The Athenians might have used rock or marble in the construction of their buildings but there was no available substitute for the use of lumber in shipbuilding, and when the importance of the ship in creating and sustaining a great state is considered, it must be admitted that the lack of forest in Attica was a deficiency of no trifling import. The supply of vegetables and fruits produced in Attica must have been meagre, and even if these were of the superior quality which has been claimed for them, they would not have been a source of any great revenue. The only domestic animals native to the country were sheep and goats. These were found everywhere thruout Greece and should be considered as sources of wealth only in a pastoral land, their production being of special advantage to a state engaging in the



enterprises and achievements of a more advanced stage of civilization. Also, the raising of sheep and goats never became a great industry in Attica but was only carried on in connection with the domestic establishment. Altho its quality may have been excellent, wool never seems to have been an important commodity in trade for the Athenians. The mineral resources of Athens were good, but as was usual in ancient times, the mineral products did not receive attention until the state had advanced quite far in its development. They had their part in sustaining industry and commerce but may not be regarded as important causes of either. Besides, mineral wealth has never been considered as especially advantageous in advancing that culture and civilization in the development of which the Athenians won their undying fame. It has been observed that mineral wealth seldom advances civilization in its own immediate vicinity, altho it may be an aid to non-resident owners and to the distant peoples who control and utilize the output of the mines. In ancient times, no significant advance in culture was made in the vicinity of the gold mines in Egypt, the silver mines in Spain, the iron of Thrace or the tin mines of Britain. In our own times, the gold fields of Klondike, California, Australia and South Africa have been looked upon as the homes of lawlessness and of reversion to primitive instincts, places where prevail conditions entirely opposite to those of an organized and progressive state. Therefore, because of the character of this resource and secondly because of the lateness of its utilization, the mineral products of Athens may not be considered in themselves as a decisive factor in the development of the state.





If Athens had remained dependent upon her own products and her own natural resources she never could have supported as large a population as she did in the days of her greatest achievement. But the Athenian mind was ingenious and, unlike the soil, intensely fertile and productive. When the land failed to produce the required necessities, the Athenian supplied the deficiencies by importing from other lands; when the water supply was insufficient, he learned to preserve the rainfall from one season to the next and to water his gardens by systems of irrigation. Hence, the Athenian never permitted unfavorable conditions to hamper his progress, but he early learned through some innate ability to shape natural conditions to suit his desire in the same manner as he transformed unyielding marble into the semblance of soft flesh and flexible muscle.

The "migratory" effects, as Miss Semple terms them, of the situation of Athens are easily seen and no doubt had some influence upon her history. She, as is the case with most of the Greek cities, preserved a spirit of independence which is explained as a result of the segregation caused by mountain barriers. On the other hand, she was easily accessible to influence from the sea and so was not cut off entirely from communication with people of other lands. However, these two conditions, a combination of segregation and accessibility, were found in connection with numerous other cities in Greece and elsewhere and could not have exerted enough influence to account for the Athenian genius and the history of its achievements.

In the present paper, we do not endeavor to explain what was the cause which made the Athenians in some strange manner



embody in their character the highest development of all the qualities of the Ionian race. We merely wish to refute the explanation offered by several writers that the physical environment was this moulding influence. We have attempted to show that Athens enjoyed no surpassingly favorable natural conditions, that her physical environment was practically the same as that of other cities in Greece, whose histories can in no way rival hers, that she was even deficient in certain resources considered essential to the upbuilding of an influential state. Moreover, if the environment is to be considered as exerting a paramount influence, how can the short duration of the glory of the Athenian state be explained? How may we account for the fact that before the period of the Persian Wars and again after the fourth century Athens was not at all preeminent, since her physical environment remained the same and its influence must have been constant? In addition, this environment seemed to have absolutely no effect upon the Turks when they occupied the land and were subjected to the same conditions which are said to have made the Athenian the most gifted of all his race. Likewise, the present-day Greek inhabitants of Athens and the surrounding country reveal but few of the characteristics of their renowned ancestors and those few may be explained as a result of emulation. Therefore, the distinctive attainments of the Athenian people can not be explained as being to any great degree the result of the influence of the physical environment of Athens operating upon the character of the inhabitants.





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Insufficient time prevents a full discussion concerning the effect of the physical geography of Rome upon her history. We shall merely endeavor to sketch the general conditions of her environment and to outline what results may be attributed to these conditions.<sup>1</sup>

Rome, like Athens, is found to have poor soil; but, unlike Athens, Rome suffered from too much moisture. The soil is sandy and hence in itself is not suited for the best agricultural purposes. Then, in addition, frequent severe floods and the unusually large amount of underground water causes much of the soil to lie in a swampy condition. Even the olive and fig, which were widely produced thruout the ancient world, were not found in any abundance near Rome. In spite of the excess of water, good springs are rare in the vicinity of Rome. Only two small ones, a spring in the Tullianum and another of the Camenae near the Porta Capena are to be found at Rome. The climate of Rome was distinctly unhealthful, its perniciousness a result of

1. Some of the most important literature upon the subject of the history of Rome in relation to her physical geography is:
  - (1) Th. Mommsen, Römische Geschichte, Vol. I, Chap. IV, Die Anfänge Roms. Ed. 10, Vols. 1, 3, 5, Berlin 1907-09.
  - (2) R. Pöhlmann, Die Anfänge Roms, Erlangen, 1881.
  - (3) H. Nissen, Italische Landeskunde, Berlin, 1902; II, 2, Chap. IX, Rom.
  - (4) F. di Tucci, Dell' antico e presente stato della Campagna di Roma in rapporto alla salubrità dell' aria e alla fertilità del suolo, Rome, 1878.
  - (5) Tenny Frank, Roman Imperialism, New York, 1914.





the fever-breeding water which stood around the city. The Romans modified this condition to some extent by a system of drains, but they could not eliminate it.

To balance these unfavorable conditions, Rome had a distinct advantage in her situation which was such as to give her a decided superiority over her rival cities. She was located at the one place where the Tiber is easily crossed and yet also easily defended because of its protecting hills. In this way, Rome, commanding both sides of the Tiber to its mouth, gained control of the commerce passing along the Tiber and Arno rivers, the main highway of commerce passing thru central Italy. One branch of this commerce was especially adapted to the advantage of Rome. The interior of Italy had no rock-salt and consequently was dependent upon the sea-shore regions for its supply. There were important salt works at Ostia and this fact gave Rome the control of the entire salt trade with the interior of Italy. One evidence of this old industry is found in the name of the Via Salaria, the Salt Road, leading from Rome to the interior. The location of Rome was favorable, also, in that, while the city itself was situated inland far enough to secure immunity from piratical invasions, her port at the mouth of the Tiber was the only safe harbor along a considerable stretch of the western coast of Italy. There was yet another aspect to the importance of Rome's situation. She was a boundary city, a sort of outpost of the Latin race, protecting it against the northern tribes, the Etruscans in particular.

The results of these conditions were, on the whole, favorable. As is claimed for the Athenians, so also in the case of



the Romans, it is asserted that their unfruitful fields and unfavorable climate made them a hardy race. The unhealthy lowlands caused a concentration of population upon the hills, which developed a close community life and a unity of purpose among the people. The active part which the Romans took in commerce brought them in touch with outside civilization; yet as Rome grew as a commercial center, as an outpost city and center of sturdy peasantry she retained her early vigor and wholesome morals. The other cities of Latium gradually were surpassed by Rome because they were inferior in commercial advantages and as a result of their unimportance in that respect were not in such constant warfare and began to degenerate thru lack of activity. Soon Rome acquired leadership in the whole of Italy, and after she had had a taste of the advantages of conquest of more fertile lands, her desire rapidly increased until the whole world was ruled by this city of the seven hills.





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